

E X E C U T I V E S U M M A R Y
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UNION CARBIDE CORPORATION
Redd Block Four Mine

Section 33, T. 28S., R. 24E.
San Juan County, Utah
ACT/037/046

LOCATION:

Union Carbide Corporation proposes to develop an underground, random room-and-pillar, single vertical shaft entry uranium mine 3 miles west of La Sal, Utah. The mine facilities will be located on a thick alluvial fan south of the La Sal Mountains.

SOILS AND GEOLOGY:

Union Carbide wishes that the geology be held confidential. Soils are relatively deep and tend to be sandy; the soil overlies thick gravelly alluvium.

HYDROLOGY:

There are no perennial streams immediately adjacent to the mine site.

Groundwater occurs in the surfacial gravel alluvium and the immediately underlying Dakota Sandstone and Burro Canyon Formation. The single vertical shaft entry will be concrete lined and if groundwater is encountered during the drilling of vent holes grout will be used.

ECOLOGY:

The mine site is located in the Sagebrush-Native Grass community. Pinion and Juniper occurs in patches. Much of the adjacent area has been seeded with crested wheatgrass. The area is grazed.

Because the mine site is adjacent to a well used highway impacts on wildlife should be minimal.

STRUCTURES AND FACILITIES:

Proposed Structures and Facilities include the following:

- a. One single concrete-lined vertical shaft entry.
- b. A seven foot diameter venthole to serve as an escapeway.
- c. Five additional ventholes.
- d. A waste-rock dump.
- e. Approximately 500 feet of access roads.
- f. Undetermined number of buildings such as a hoist-house, shop, and offices.

MINING AND RECLAMATION:

Enclosed is a copy of Union Carbide's narrative concerning their Mining and Reclamation Plan.

IMPACTS:

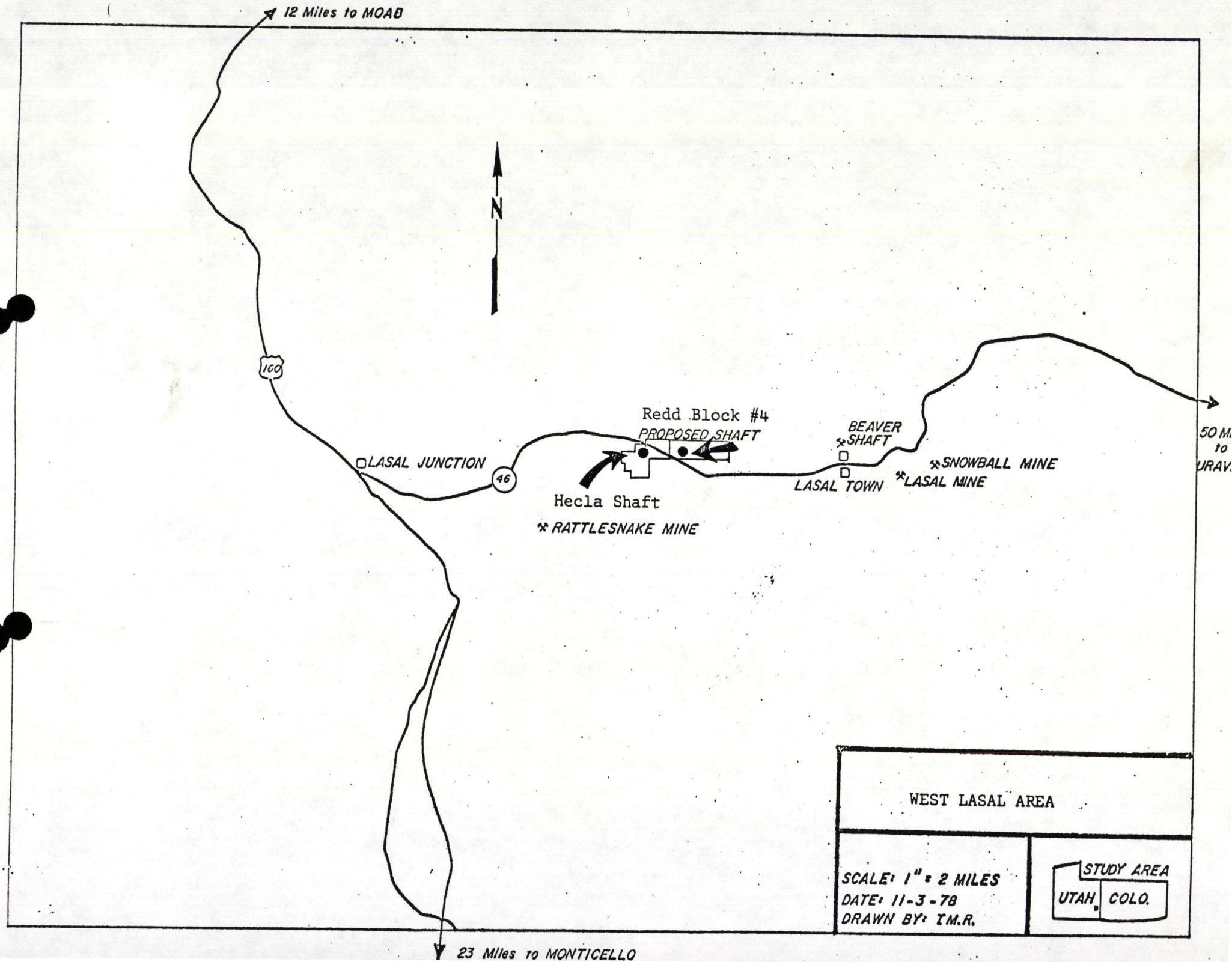
The mine facilities should have minor impacts on the environment. The Reclamation Plan will eliminate safety hazards and minimize visual and environmental impacts.

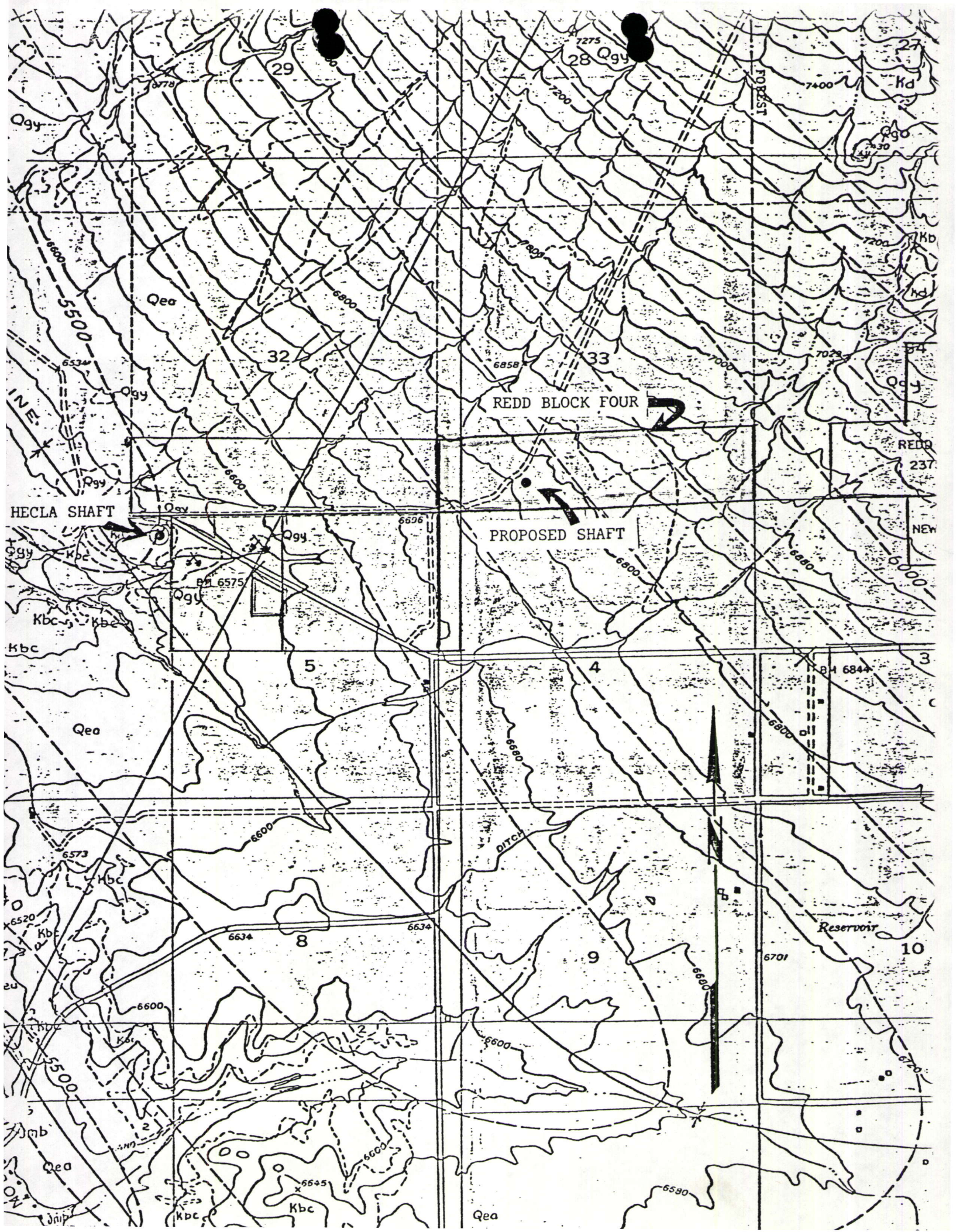
A groundwater pollution problem was investigated in the past that may have been caused by Union Carbide's drilling. Soap and oil were reported in the well water of a local resident. The problem no longer exists.

The LaSal-Snowball and Hecla Mines are similar to the proposed Redd Block Four Mine. There have been no impacts reported to this Division from the mines.

SURETY ESTIMATE:

See enclosed form.





REDD BLOCK FOUR

RECLAMATION

Upon final abandonment of the mine, surface debris, scrap metal, discarded wood and other materials will be buried or removed from the site. The headframe, buildings and other surface facilities will be dismantled and removed. The shaft and ventilation holes will be sealed with suitable concrete-steel covers to prevent accidental or unauthorized entry.

Dumps, pads, and other disturbed areas will be stabilized. Stabilization will consist of rounding of the outer edges of the dumps and pads, reducing the slope of waste rock faces and ¹⁰regarding of drainage contours on the affected areas. Topsoil and overburden will be spread back over these areas where possible. Roads will be graded to match the existing topography.

Compacted surfaces will be scarified, and seeded as recommended and then drag covered. Seeding will preferably take place in the fall. At present there are no plans for the addition of a fertilizer. However, should revegetation tests prove soil amendments significantly helpful in establishing vegetation, then amendments and other proven surface techniques will be employed.

channels. A large dry wash passes through the proposed site area in a south-westerly direction. A culvert or small bridge may have to be installed to cross this channel. Surface facilities and waste dump will be constructed so as to not significantly interfere with the surface drainage patterns. Water for mining operations and change room facilities will be provided by a well located on site. If significant aquifers are encountered in ventilation shaft drilling, these will be lined so as to prevent co-mingling of aquifers and entrance into the mine workings.

The shaft site is located approximately 500 feet east of an existing road and will require the construction of a haulage road for site access. Other small service roads will be required to drill and service ventilation shafts. All roads will be constructed so as to insure proper drainage and erosion control.

REDD BLOCK FOUR

The shaft site and main ancillary facilities will be located approximately 1,600 feet east and 500 feet north of the southwest corner of Section 33. The proposed site is located on a southern alluvial fan of the La Sal Mountains having a slope of approximately 5 to 8 degrees to the southwest. Present vegetative cover is predominantly sagebrush with associated vegetative species. Surface disturbances will be necessary for site leveling, access roads and dump area. Some disturbance is already present from drilling and ranching activities. Topsoil will be stockpiled and stabilized where practical in these and future construction operations affecting the surface.

A single, concrete lined, twelve foot shaft entry is proposed with construction to begin in late 1979 or early 1980. Development headings would be driven to the east and to the west. A seven or eight foot diameter venthole will be drilled and lined in 1980 or 1981 to serve as a secondary escapeway. It is anticipated that five or more ventholes, 5, 7, or 8 feet in diameter will be required during the life of the mine.

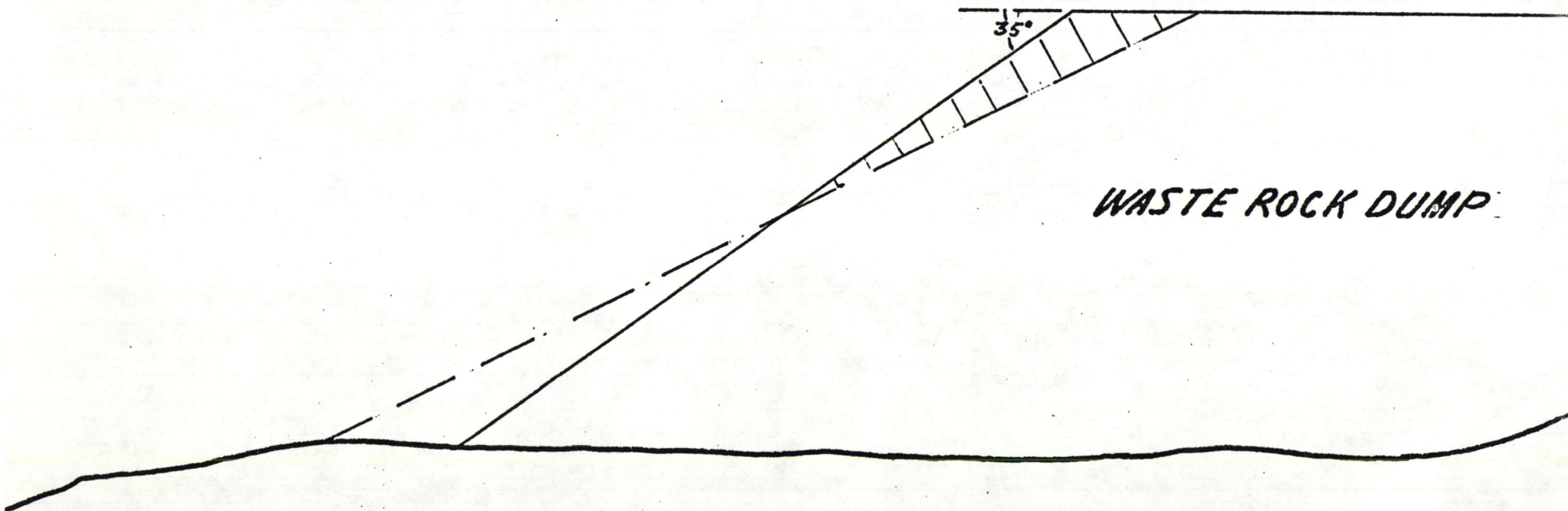
Waste rock generated from mine development will consist of sandstone and mudstones and will be deposited on the surface to the south and west of the shaft. Where practical topsoil affected by dump expansion will be salvaged and stockpiled. Normal "over the edge" waste dumping will tend to naturally sort the waste materials with the larger rock materials rolling to the bottom, thus forming a free draining waste pile, with an expected 35 degree angle of repose. Past mining experience indicates that slope stability will not be a problem.

The waste rock is expected to be similar in composition to that of the La Sal - Snowball Mine. Testing by Colorado State University found the La Sal - Snowball mine wastes to be capable of supporting salt tolerant vegetation, with a pH of 7.8 and to be low only in phosphorous, with trace elements present.

This operation is not expected to significantly affect either surface or groundwater systems. There are not natural water bodies in the area other than ephemeral drainage

*TYPICAL CROSS SECTION
OF REGRADED AREA*

NO SCALE



WASTE ROCK DUMP